

1632

PATENT  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Seed et al.	Confirmation No.:	4930
Serial No.:	10/521,634	Art Unit:	1632
371(c) Date:	October 11, 2005	Examiner:	M.C. Wilson
Customer No.:	21559		
Title:	METHODS FOR THE PRODUCTION OF CELLS AND MAMMALS WITH DESIRED GENETIC MODIFICATIONS		

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Applicants submit the references listed on the enclosed Form PTO-1449, copies of which are enclosed, with the exception of U.S. patents and U.S. patent application publications.

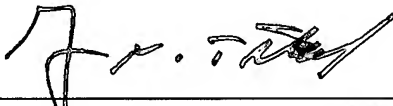
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Respectfully submitted,

Date: 14 August 2007

  
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SUBSTITUTE FORM PTO-1449 (MODIFIED)  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)  (37 C.F.R. § 1.98(b))	Attorney Docket No.	00786/432002
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U.S. PATENT DOCUMENTS						
Examiner's Initials	Document Number	Publication Date	Patentee or Applicant	Class	Subclass	Filing Date (If Appropriate)
	4,994,384	Feb. 19, 1991	Prather et al.			
	5,057,420	Oct. 15, 1991	Massey			
	5,453,366	Sep. 26, 1995	Sims et al.			
	5,464,764	Nov. 7, 1995	Capecchi et al.			
	5,527,674	Jun. 18, 1996	Guerra et al.			
	5,595,760	Jan. 21, 1997	Cherif-Cheikh			
	5,614,396	Mar. 25, 1997	Bradley et al.			
	5,672,659	Sep. 30, 1997	Shalaby et al.			
	5,843,972	Dec. 1, 1998	Dow et al.			
	5,945,577	Aug. 31, 1999	Stice et al.			
	5,998,209	Dec. 7, 1999	Jokobovits et al.			
	6,077,710	Jun. 20, 2000	Susko-Parrish et al.			
	6,090,554	Jul. 18, 2000	Woychik et al.			
	6,090,629	Jul. 18, 2000	Woychik			
	6,258,998	Jul. 10, 2001	Damiani et al.			
	6,355,412	Mar. 12, 2002	Stewart et al.			
	6,509,156	Jan. 21, 2003	Stewart et al.			
	6,700,018	Mar. 2, 2004	Richelson et al.			
	6,747,048	Jun. 8, 2004	Zhang et al.			
	6,831,102	Dec. 14, 2004	Hangeland			
	2003/0144341	Jul. 31, 2003	Renshaw et al.			

EXAMINER	DATE CONSIDERED
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.	

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	2004/0063694	Apr. 1, 2004	Browder			
	2004/0097555	May 20, 2004	Ohkawa et al.			
	2004/0097589	May 20, 2004	Yi-Lin et al.			
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)						
	Alcalay et al., "Common Themes in the Pathogenesis of Acute Myeloid Leukemia," <i>Oncogene</i> 20:5680-5694 (2001).					
	Angrand et al., "Simplified Generation of Targeting Constructs Using ET Recombination," <i>Nucleic Acids Res.</i> 27:e16, i-vi (1999).					
	Arvand and Denny, "Biology of EWS/ETS Fusions in Ewing's Family Tumors," <i>Oncogene</i> 20:5747-5754 (2001).					
	Aspland et al., "The Role of E2A-PBX1 in Leukemogenesis," <i>Oncogene</i> 20:5708-5717 (2001).					
	Barr "Gene Fusions Involving PAX and FOX Family Members in Alveolar Rhabdomyosarcoma," <i>Oncogene</i> 20:5736-5746 (2001).					
	Benton and Davis, "Screening $\lambda$ gt Recombinant Clones by Hybridization to Single Plaques In Situ," <i>Science</i> 196:180-182 (1977).					
	Bergsagel and Kuehl, "Chromosome Translocations in Multiple Myeloma," <i>Oncogene</i> 20:5611-5622 (2001).					
	Bollag et al., "Homologous Recombination in Mammalian Cells," <i>Annu. Rev. Genet.</i> 23:199-225 (1989).					
	Bower "Acquired Immunodeficiency Syndrome-Related Systemic Non-Hodgkin's Lymphoma," <i>Br. J. Haematol.</i> 112:863-873 (2001).					
	Boxer and Dang, "Translocations Involving c-Myc and c-Myc Function," <i>Oncogene</i> 20:5595-5610 (2001).					
	Capecchi "Altering the Genome by Homologous Recombination," <i>Science</i> 244:1288-1292 (1989).					
	Capecchi "Choose Your Target," <i>Nat. Genet.</i> 26:159-161 (2000).					

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	Chakraborty et al., "Genetic Lesions and Perturbation of Chromatin Architecture: A Road to Cell Transformation," <i>J. Cell. Biochem.</i> 82:310-325 (2001).
	Chen et al., "Genotype-Based Screen for ENU-Induced Mutations in Mouse Embryonic Stem Cells," <i>Nat. Genet.</i> 24:314-317 (2000).
	Crans and Sakamoto, "Transcription Factors and Translocations in Lymphoid and Myeloid Leukemia," <i>Leukemia</i> 15:313-331 (2001).
	Davila et al., "A Role for Secondary V(D)J Recombination in Oncogenic Chromosomal Translocations?," <i>Adv. Cancer Res.</i> 81:61-92 (2001).
	DeChiara "Gene Targeting in ES Cells," <i>Methods Mol. Biol.</i> 158:19-45 (2001).
	Deng and Capecchi, "Reexamination of Gene Targeting Frequency as a Function of the Extent of Homology Between the Targeting Vector and the Target Locus," <i>Mol. Cell. Biol.</i> 12:3365-3371 (1992).
	Dierlamm et al., "Genetic Abnormalities in Marginal Zone B-Cell Lymphoma," <i>J. of Hematology.</i> 88:8-12 (2003).
	Drexler et al., "Pathobiology of NPM-ALK and Variant Fusion Genes in Anaplastic Large Cell Lymphoma and Other Lymphomas," <i>Leukemia</i> 14:1533-1559 (2000).
	Durrant et al., "The Medical Research Council Trials in Adult Acute Lymphocytic Leukemia," <i>Hematol. Oncol. Clin. North Am.</i> 14:1327-1352 (2000).
	Duyster et al., "Translocations Involving Anaplastic Lymphoma Kinase (ALK)," <i>Oncogene</i> 20:5623-5637 (2001).
	Dyer and Oscier, "The Configuration of the Immunoglobulin Genes in B Cell Chronic Lymphocytic Leukemia," <i>Leukemia</i> 16:973-984 (2002).
	El Karoui et al., "Gene Replacement with Linear DNA in Electroporated Wild-Type <i>Escherichia coli</i> ," <i>Nucleic Acids Res.</i> 27:1296-1299 (1999).
	Faderl and Albitar, "Insights into the Biologic and Molecular Abnormalities in Adult Acute Lymphocytic Leukemia," <i>Hematol. Oncol. Clin. North Am.</i> 14:1267-1288 (2000).
	Falini and Mason, "Proteins Encoded by Genes Involved in Chromosomal Alterations in Lymphoma and Leukemia: Clinical Value of their Detection by Immunocytochemistry," <i>Blood</i> 99:409-426 (2002).
	Falini "Anaplastic Large Cell Lymphoma: Pathological, Molecular and Clinical Features," <i>Br. J. Haematol.</i> 114:741-760 (2001).
	Garcia-Manero and Kantarjian, "The Hyper-CVAD Regimen in Adult Acute Lymphocytic Leukemia," <i>Hematol. Oncol. Clin. North Am.</i> 14:1381-1396 (2000).
	Gojo and Karp, "The Impact of Biology on the Treatment of Secondary AML," <i>Cancer Treat. Res.</i> 108:231-255 (2001).

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	Grunstein and Hogness, "Colony Hybridization: A Method for the Isolation of Cloned DNAs that Contain a Specific Gene," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 72:3961-3965 (1975).
	Hasty et al., "The Length of Homology Required for Gene Targeting in Embryonic Stem Cells," <i>Mol. Cell. Biol.</i> 11:5586-5591 (1991).
	Holyoake "Recent Advances in the Molecular and Cellular Biology of Chronic Myeloid Leukaemia: Lessons to be Learned from the Laboratory," <i>Br. J. Haematol.</i> 113:11-23 (2001).
	Hrabé de Angelis et al., "Genome-Wide, Large-Scale Production of Mutant Mice by ENU Mutagenesis," <i>Nat. Genet.</i> 25:444-447 (2000).
	Kelly et al., "Comprehensive Genotypic Analysis of Leukemia: Clinical and Therapeutic Implications," <i>Curr. Opin. Oncol.</i> 14:10-18 (2002).
	Kuehl and Bergsagel, "Multiple Myeloma: Evolving Genetic Events and Host Interactions," <i>Nat. Rev. Cancer</i> 2:175-187 (2002).
	Küppers and Dalla-Favera, "Mechanisms of Chromosomal Translocations in B Cell Lymphomas," <i>Oncogene</i> 20:5580-5594 (2001).
	Kyba et al., "HoxB4 Confers Definitive Lymphoid-Myeloid Engraftment Potential on Embryonic Stem Cell and Yolk Sac Hematopoietic Progenitors," <i>Cell</i> 109:29-37 (2002).
	Lamorte and Park, "The Receptor Tyrosine Kinases: Role in Cancer Progression," <i>Surg. Oncol. Clin. N. Am.</i> 10:271-288 (2001).
	Larson "Recent Clinical Trials in Acute Lymphocytic Leukemia by the Cancer and Leukemia Group B," <i>Hematol. Oncol. Clin. North Am.</i> 14:1367-1379 (2000).
	Lee "Chronic Myelogenous Leukaemia," <i>Br. J. Haematol.</i> 111:993-1009 (2000).
	Licht "AML1 and the AML1-ETO Fusion Protein in the Pathogenesis of t(8;21) AML," <i>Oncogene</i> 20:5660-5679 (2001).
	Loots et al., "Identification of a Coordinate Regulator of Interleukins 4, 13, and 5 by Cross-Species Sequence Comparisons," <i>Science</i> 288:136-140 (2000).
	Maru "Molecular Biology of Chronic Myeloid Leukemia," <i>Int. J. Hematol.</i> 73:308-322 (2000).
	Mavrothalassitis and Ghysdael, "Proteins of the ETS Family with Transcriptional Repressor Activity," <i>Oncogene</i> 19:6524-6532 (2000).
	Morris et al., "Alk <sup>+</sup> CD30 <sup>+</sup> Lymphomas: A Distinct Molecular Genetic Subtype of Non-Hodgkin's Lymphoma," <i>Br. J. Haematol.</i> 113:275-295 (2001).
	Müllauer et al., "Mutations in Apoptosis Genes: A Pathogenetic Factor for Human Disease," <i>Mutat. Res.</i> 488:211-231 (2001).

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	Munroe et al., "Mouse Mutants from Chemically Mutagenized Embryonic Stem Cells," <i>Nat. Genet.</i> 24:318-321 (2000).
	Murphy "Use of Bacteriophage Lambda Recombination Functions to Promote Gene Replacement in <i>Escherichia coli</i> ," <i>J. Bacteriol.</i> 180:2063-2071 (1998).
	Muyrers et al., "Rapid Modification of Bacterial Artificial Chromosomes by ET-Recombination," <i>Nucleic Acids Res.</i> 27:1555-1557 (1999).
	Nefedov et al., "Insertion of Disease-Causing Mutations in BACs by Homologous Recombination in <i>Escherichia coli</i> ," <i>Nucleic Acids Res.</i> 28:e79, i-iv (2000).
	Nolan et al., "A Systematic, Genome-Wide, Phenotype-Driven Mutagenesis Programme for Gene Function Studies in the Mouse," <i>Nat. Genet.</i> 25:440-443 (2000).
	Padua et al., "Molecular, Cytogenetic and Genetic Abnormalities in MDS and Secondary AML," <i>Cancer Treat. Res.</i> 108:111-157 (2001).
	Papakostas et al., "Cholesterol in Mood and Anxiety Disorders: Review of the Literature and New Hypotheses," <i>Eur. Neuropsychopharmacol.</i> 14:135-142 (2004).
	Pavan et al., "Modification and Transfer into an Embryonal Carcinoma Cell Line of a 360-Kilobase Human-Derived Yeast Artificial Chromosome," <i>Mol. Cell. Biol.</i> 10:4163-4169 (1990).
	Pennacchio et al., "An Apolipoprotein Influencing Triglycerides in Humans and Mice Revealed by Comparative Sequencing," <i>Science</i> 294:169-173 (2001).
	Poteete and Fenton, " $\lambda$ red-Dependent Growth and Recombination of Phage P22," <i>Virology</i> 134:161-167 (1984).
	Pui and Relling, "Topoisomerase II Inhibitor-Related Acute Myeloid Leukaemia," <i>Br. J. Haematol.</i> 109:13-23 (2000).
	Ramírez-Solis et al., "Chromosome Engineering in Mice," <i>Nature</i> 378:720-724 (1995).
	Reid et al., "Cotransformation and Gene Targeting in Mouse Embryonic Stem Cells," <i>Mol. Cell. Biol.</i> 11:2769-2777 (1991).
	Rideout et al., "Correction of a Genetic Defect by Nuclear Transplantation and Combined Cell and Gene Therapy," <i>Cell</i> 109:17-27 (2002).
	Ruediger et al., "Disruption of Protein Phosphatase 2A Subunit Interaction in Human Cancers with Mutations in the A $\alpha$ Subunit Gene," <i>Oncogene</i> 20:10-15 (2001).
	Sattler and Griffin, "Mechanisms of Transformation by the BCR/ABL Oncogene," <i>Int. J. Hematol.</i> 73:278-291 (2001).
	Seidel and Look, "E2A-HLF Usurps Control of Evolutionarily Conserved Survival Pathways," <i>Oncogene</i> 20:5718-5725 (2001).

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	Smith et al., "Cre-loxP Chromosome Engineering of a Targeted Deletion in the Mouse Corresponding to the 3p21.3 Region of Homozygous Loss in Human Tumours," <i>Oncogene</i> 21:4521-4529 (2002).
	Stevenson et al., "The Occurrence and Significance of V Gene Mutations in B Cell-Derived Human Malignancy," <i>Adv. Cancer Res.</i> 83:81-116 (2001).
	Stice and Keefer, "Multiple Generational Bovine Embryo Cloning," <i>Biol. Reprod.</i> 48:715-719 (1993).
	Stürzl et al., "Human Herpesvirus-8 and Kaposi's Sarcoma: Relationship with the Multistep Concept of Tumorigenesis," <i>Adv. Cancer Res.</i> 81:125-159 (2001).
	Swerdlow and Williams, "From Centrocytic to Mantle Cell Lymphoma: A Clinicopathologic and Molecular Review of 3 Decades," <i>Hum. Pathol.</i> 33:7-20 (2002).
	Testa et al., "Engineering the Mouse Genome with Bacterial Artificial Chromosomes to Create Multipurpose Alleles," <i>Nat. Biotechnol.</i> 21:443-447 (2003).
	Thiebaut et al., "Adult Acute Lymphocytic Leukemia Study Testing Chemotherapy and Autologous and Allogeneic Transplantation. A Follow-up Report of the French Protocol LALA 87," <i>Hematol. Oncol. Clin. North Am.</i> 14:1353-1366 (2000).
	Thyagarajan et al., "Characterization of Homologous DNA Recombination Activity in Normal and Immortal Mammalian Cells," <i>Nucleic Acids Res.</i> 24:4084-4091 (1996).
	Tsuzuki and Rancourt, "Embryonic Stem Cell Gene Targeting Using Bacteriophage Lambda Vectors Generated by Phage-Plasmid Recombination," <i>Nucleic Acids Res.</i> 26:988-993 (1998).
	Valenzuela et al., "High-Throughput Engineering of the Mouse Genome Coupled with High-Resolution Expression Analysis," <i>Nat. Biotechnol.</i> 21:652-659 (2003).
	Wakayama et al., "Mice Cloned from Embryonic Stem Cells," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 96:14984-14989 (1999).
	Wakayama et al., "Nuclear Transfer into Mouse Zygotes," <i>Nat. Genet.</i> 24:108-109 (2000).
	Wiles et al., "Establishment of a Gene-Trap Sequence Tag Library to Generate Mutant Mice from Embryonic Stem Cells," <i>Nat. Genet.</i> 24:13-14 (2000).
	Wilson et al., "Yeast Artificial Chromosome Targeting Technology: An Approach for the Deletion of Genes in the C57BL/6 Mouse," <i>Anal. Biochem.</i> 296:270-278 (2001).
	Yang et al., "Homologous Recombination Based Modification in <i>Escherichia coli</i> and Germline Transmission in Transgenic Mice of a Bacterial Artificial Chromosome," <i>Nat. Biotechnol.</i> 15:859-865 (1997).
	Yang et al., "Targeted Disruption of the Murine Fanconi Anemia Gene, <i>Fancg/Xrcc9</i> ," <i>Blood</i> 98:3435-3440 (2001).
	Yang and Seed, "Site-Specific Gene Targeting in Mouse Embryonic Stem Cells with Intact Bacterial Artificial Chromosomes," <i>Nat. Biotechnol.</i> 21:447-451 (2003).

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(Use several sheets if necessary)

(37 C.F.R. § 1.98(b))

	Yokoi et al., "Cblb is a Major Susceptibility Gene for Rat Type 1 Diabetes Mellitus," <i>Nat. Genet.</i> 31:391-394 (2002).
	Yu et al., "An Efficient Recombination System for Chromosome Engineering in <i>Escherichia coli</i> ," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 97:5978-5983 (2000).
	Zambrowicz et al., "Disruption and Sequence Identification of 2,000 Genes in Mouse Embryonic Stem Cells," <i>Nature</i> 392:608-611 (1998).
	Zhang et al., "A New Logic for DNA Engineering Using Recombination in <i>Escherichia coli</i> ," <i>Nat. Genet.</i> 20:123-128 (1998).
	Zhang et al., "Towards Genetic Genome Projects: Genomic Library Screening and Gene-Targeting Vector Construction in a Single Step," <i>Nat. Genet.</i> 30:31-39 (2002).
	Zijlstra et al., "Germ-Line Transmission of a Disrupted $\beta_2$ -Microglobulin Gene Produced by Homologous Recombination in Embryonic Stem Cells," <i>Nature</i> 342:435-438 (1989).
	International Search Report from PCT/US03/24322, mailed July 2, 2004.

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